

CHAMBERS' EDINBURGH JOURNAL

CONDUCTED BY WILLIAM AND ROBERT CHAMBERS, EDITORS OF 'CHAMBERS'S INFORMATION FOR THE PEOPLE,' 'CHAMBERS'S EDUCATIONAL COURSE,' &c.

No. 499. NEW SERIES.

SATURDAY, JULY 23, 1853.

PRICE 1½d.

BEATING THE BOUNDS.

A STRANGER to the civic customs prevailing among the English, is sometimes startled with curious out-of-door exhibitions, which defy all his attempts to fathom them; and it sometimes happens, too, that on seeking an explanation from those who are supposed to know all about it, he is put off with a conjecture, more or less fortunate, instead of a veracious solution of the problem. The wisdom of our forefathers is often a riddle to their descendants; and though she lift up her voice in the streets, as in affairs municipal she is very much given to do, she cries in an unknown tongue to the majority of those who hear. In the streets of London, numberless demonstrations are made, from time to time, before the eye of the public, of the signification of which the larger portion of spectators know but little, and care less; yet they all have a signification, if we choose to look for it; and primitive and even puerile as some of them may appear, they might hardly be abolished without the risk of losing with them some positive advantage which it would be better to retain. Among these out-of-door observances, one of the most frequent occurrence in the summer months, is that procession of juveniles which once a year, in every parish in London, starts from the vestry-door of the parochial church to traverse the limits of the parish, or, in colloquial phrase, to 'beat the bounds.' The practice is a very old one—how old, we have no means of ascertaining. Every parish is of course in possession of maps of its own domain; but something more than this is supposed to be necessary in order to prevent its limits from being encroached upon. In London, a single yard of land may chance to be worth a large sum of money; and every possible precaution is taken to prevent any doubt as to the proprietorship of every square inch of the soil. Cast-iron plates bearing inscriptions in raised letters, indicative of the claim of the parish to the land upon which they stand, are inserted in the walls of houses and warerooms, or affixed to beams of timber or upright posts along the whole route of the parish boundaries; and these are formally visited and identified once a year, to ascertain that they stand where they did; and the boys of the charity-school are always chosen as the visitors, in order that the rising generation may be duly impressed with their parochial rights and privileges, and made intimate with the extent of the territory which at some future day may chance to be confided to their guardianship. In ancient times, as we are informed upon very good authority, the custom of beating the bounds, which is now one of unmingled pleasure and festivity, was celebrated in a manner not exclusively joyous. The boys

did not then regard it altogether as a holiday, seeing that certain of their number, who, it is to be hoped, had earned a right to that distinction, were regularly horsed and soundly whipped in presence of the several inscription-plates defining the boundaries. The castigation, it was shrewdly judged, was an efficient means of impressing the localities upon their memories. There is no doubt that our forefathers were right in that respect: a fact thus effectually brought home to an individual's consciousness, at that tender age when the mind (and the epidermis) is susceptible of the slightest impressions, was not likely to be forgotten; and there is no record to shew that it ever was. It is long ago, however, since innovations crept into this part of the ceremony; and within the memory of man a different practice has prevailed. At the present day, the boys carry in their hands willow-wands peeled white; and with these they commence a combined assault upon the cast-iron inscription-plates wherever they find them—a process which, in the opinion of our modern humanitarians, is thought to answer quite as well, though dissentients from that opinion are not wanting among the admirers of a hoar antiquity.

In ancient times, too, unless my authority is himself misinformed, the boundaries of the London parishes were all beaten in one day, which must have been a memorable day for the boys of the city, considering the cakes and ale, which were always abundant upon the occasion, to say nothing of the flagellations above alluded to. This practice, however, was found to have its inconveniences. It may happen in the case of a destructive conflagration, that in spite of all precautions, the boundary-mark of a parish, if not obliterated, is overthrown and buried in a mass of ruins—and when recovered, there may be a doubt or a dispute as to the precise position it previously occupied. This actually took place some years ago: a large warehouse, which stood partly in the parish of St Botolph Aldersgate, and partly in St Bartholomew's, was destroyed by fire. The premises were in ruins when the day for beating the bounds arrived. It chanced, unfortunately, that two armies of charity-boys met upon the spot, and, as a matter of course, disagreed as to the position of the boundary-mark, which, in this case, it was their business to replace. They quarrelled, and fought a bloody battle. The inscription-plate, raised upon a pole, was the object of a furious contention; now it was in possession of one party, who endeavoured to plant it too far west—and anon it was in the hands of another, who bore it a full half yard to the east. It was a new battle for the standard. The fight raged round the pole amidst a volcano of dust that rendered the combatants invisible: now and then, a disabled

champion with black eye or bloody nose emerged from the cloud, and sought the refreshment of the pump. They made a good many broken heads among them; but they never settled the dispute after all. The combat was only put an end to by the police securing the bone of contention and carrying it off. Since then, it has not been deemed advisable that two adjoining parishes should beat their bounds on the same day; and care is taken that two irascible factions shall not have the opportunity of breaking the peace of the city. The parishes now choose different days for the ceremony—saints' days generally having the preference.

My own experience in this way is but small, having officiated but on one occasion. What took place then, I shall relate for the satisfaction of the curious. I have been a shopkeeper in the city for more than twenty years, and am considered to do a good stroke of business. When I was chosen select vestry-man last year, I cannot say I was very much surprised. I was not sorry either; perhaps I felt a little flattered. At any rate, I did not refuse the office, which in our parish is, to say the worst of it, at least as convivial as it is burdensome. We dispense a good deal of charity one way and another; and if we make merry after it now and then, nobody is the worse for that—not ourselves, I'm sure, whatever cross-grained folks may think about it. A few weeks ago, I received an intimation that my attendance at the parish church, where I was to join the procession to traverse the bounds, would be expected on a certain day, at an hour specified. On the morning of the day named, there came to my shop by way of reminder, and perhaps, too, as one of my neighbours hinted, by way of placebo to my wife, a paper packet, which, on being opened, was found to contain five or six yards of elegant white ribbon—a sort of thing which the ladies, bless their hearts! always know what to do with—and a couple of pair of silk stay-laces of a rather antique breadth—such, I fancy, as used to be worn at the time when the plump citizenesses followed the fashion of lacing their bodices on the outside. We had a hearty laugh, my good dame and I, over the contents of the packet, which were soon whipped out of sight; and then I brushed up a bit, and set off to the church. I met my colleagues at the vestry at the hour appointed. Here, while the boys were getting into marching-order, we took a friendly glass of wine together; and when all were prepared to set forth, I found myself at the head of the column, armed with a bunch of flowers as big almost as the head of an ox, and with a companion furnished in a similar manner on each side of me. It wanted an hour of noon when we sallied forth down the street. Our way lay through various streets, lanes, courts, and alleys, and along the bank of the river. I cannot say that I traversed the whole limits of the parish myself, but I can certify the boys did. At all the recognised boundaries, they set up a jovial shout, and battered away at the iron landmarks with their willow-wands. In some places, they had to climb ladders; in others, to dive into cellars; now their yellow breeches and blue stockings were seen cascading through an open window; now the whole school marched boldly into a tailor's shop, and began jumping and poking with their sticks at the ceiling; then they would knock at the door of a private dwelling, and the moment it was opened, rush down to the cellar in search of the rusty plate, emerging again with three cheers, in token that all was as it should be. In this way, we spent, I should say, something like four hours, without exciting much attention from the public, who, in London city, have a rather characteristic habit of attending to their own business, and leaving other people to follow theirs. Here and there we attracted some observation, and our yellow-legged regiment picked up a few recruits of their own age and standing, who seemed to desire nothing better than to share in the frolic of the procession. When

we had completed the survey of the boundaries, and ascertained that the parish stood in the same place it did on that day twelvemonth—none of the cast-iron tablets having disappeared from their positions—our business was concluded. What followed, I do not consider myself bound to state categorically. If we gave the boys a substantial dinner, which is quite as agreeable a thing to remember as a sound whipping; if they got a glass of wine after it, as well as a slice of cake; if young Bob Grimes carried home a couple of tapped bottles of port, to help his mother over her convalescence after a rheumatic fever; and if, after the boys had gone home, we also sat down to a comfortable dinner, a snug party of twelve, and enjoyed ourselves in our turn, after a walk that had given us all an appetite—nobody has a right to complain; because I defy any man to come forward and prove that he or his ever contributed a single penny towards the expense.

This old custom of beating the bounds of parishes is by no means confined to London, as most of my readers know, although it differs there in some important respects, as I have shewn, from the practice prevailing in country towns. In rural districts it is not always so harmless as it is within the sound of Bow Bells. I have seen the ceremony performed many years ago, in my young days, by an awkward squad of clodhoppers, headed by the beadle in his magisterial robes, in a way not at all indicative of the march of intellect in that quarter. I have known a troop of heavy-heeled rustics tramp over the boundary-line, clean through a farmer's rising crop, or over a gentleman's, or even a lady's flower-beds, in spite of any remonstrance the owner could make to deter them; and I have seen walls overthrown, and fences pulled up, when there was no necessity for touching them, solely because the spoilers had a prescriptive right to make their way through them on one day of the year. Those who remember how these 'possession days,' as they were then called, used to terminate in the old times before corporation reform—with what quarrelling and drunkenness the nights closed in—how the parishes were literally in possession of the mob till past midnight—will not be disposed to find fault with the citizens of London for the way in which they manage the matter.

Talking of that, reminds me of a 'possessioning' in which I once bore a part when I was a boy. I served my apprenticeship in the gay and brilliant city of Bath, and, as near as I can calculate, it must have been somewhere about the year 1819 the event which I am going to narrate took place. At that time, the beating of the bounds of the city came off in June, and was a grand summer-day's holiday for all concerned in it. A great deal of fun was mixed up with the ceremony; bushels of buns, baked for the purpose, were scrambled for by the mob, among whom they were thrown. A part of the route lay through the city and suburbs, and a part along the course of the river Avon. A canal-boat, decked out for the occasion, served for the corporation barge, from which a shower of buns flew continually to the banks, from whence half of them rolled into the water, whither they were followed by eager urchins, who made no account of a ducking in such a cause. A band of music accompanied the cortège, which consisted of members of the corporation, townsmen with their sons and apprentices, and a hundred or so of school-boys. The procession was in movement nearly the whole day, stopping occasionally at various places, and partaking of libations more copious than prudent. The latter part of the route along the boundary lay across the river, at a ferry near South Parade, the once fashionable promenade of Beau Nash and his followers. Here the whole party of us, numbering some hundreds, had to cross in a flat-bottomed boat, which was pulled over the river by means of a rope strained across. The boat would carry safely, perhaps, a dozen persons; but thirty rushed into

it, and, for a wonder, reached the other side, and disembarked without accident.

At the second trip, above forty, half of them men full-grown, and three-parts intoxicated, jumped into it, lowering it in the water to within an inch of the gunwale. The ferryman expostulated in vain, and was compelled to attempt the passage. When about half-way over, the boys began rocking the boat—in an instant, it toppled over, turned bottom upwards, and immersed the whole living mass, in one dense cluster of struggling beings, in twenty feet of water. A fearful shriek rose on the banks, and then a few moments of terrible silence, as we viewed the evidences of the struggle going on beneath the surface of the river. The water surged and bubbled, and seethed and twisted in a hundred whirlpools, as we held our breath and strained our eyeballs for a sight of our lost companions. There were at least a dozen strong swimmers among them, but they had all gone down in one entangled mass, and no sign of a swimmer appeared above the foam. No boats were near, and although messengers had started off to fetch them, it seemed an age before any arrived on the spot. The ferryman clung to the rope, and, in spite of the drowning men pulling at his legs, managed to warp himself ashore. The ferryboat floated slowly down the sluggish stream, and three or four boys who had clung desperately to it, were taken up by an advancing wherry. After an interval which I cannot attempt to measure, a number of hats and garments belonging to the drowning crew floated into view, and a few minutes later, several inanimate bodies rose, one or two at a time, to the surface. These were pulled out with all haste, and laid on the shelving bank, where, under the care of a few medical men hurriedly called to the spot, means were adopted to restore animation. There was a cry for bedding and blankets, I remember, and the inhabitants of the South Parade threw the desiderated articles plentifully from their windows. The green bank of the river was soon converted into a sort of hospital, and a hundred hands were engaged in stripping, chafing, and rolling the insensible bodies. By this time a number of boats, in which men armed with long hooked poles, and groping with them in the deep waters, kept up a continual search, were upon the spot, and paddling about in all directions, every now and then lifting another body from the depth, and sometimes two or three clutched together in the death-grasp. News of the calamity had spread like wild-fire throughout the whole of the town, and now crowds of distracted friends came rushing bareheaded through the streets to the scene of the disaster—mothers and sisters to find their sons and brothers dead or dying on the banks, and wives whose husbands were yet at the bottom of the flood. The dragging of the river continued all the evening till long after dark. Most of the bodies were recovered that night—a few, having been carried down the stream, were not found for some days. Of the number of the victims, I have no distinct remembrance at this distance of time. I lost two of my most intimate companions, both of them excellent swimmers. No one sat down that day to the plentiful dinner to which all had been hastening so jovially. The event cast a gloom over the fashionable city which was not soon dissipated. That day twelve-month the city bounds were not beaten, and I have no recollection that the holiday connected with such a fatal remembrance was ever renewed upon its former footing.

There is no parallel to be found to the above miserable tragedy in the whole annals of the London corporation—although we have our aquatic processions, as all the world knows. The grandest of these is of course that which takes place on Lord Mayor's-day, the particulars of which are too well known to be repeated here. But there are other excursions upon the river on a smaller scale, which also take place periodically,

of which those who do not participate in them know but little or nothing. One of these has received from the populace the sarcastic designation of swan-hopping, from the ignorant notion which prevails, that the members of the corporation embark on board their barges in a body to count the swans on the river, which are supposed to be, and for aught I know may be, their property. Perhaps the term may have originated in the fact, that this kind of excursion being one in which business and pleasure are united, the common-councilmen sometimes take their wives and daughters with them, when a dance may happen to take place upon the sward of some shady meadow. The real object of the excursion is, however, the survey of certain estates which belong to the city, and which lie on the banks of the river, and are leased to tenants bound over to the observance of specified conditions, and therefore requiring occasional surveillance. When it comes to pass that a 'griffin' joins one of these parties, he becomes conventionally liable to certain practical jokes, which have for their object the making him intimately acquainted with an old landmark, in the shape of a big stone on the bank of the river at Staines, which is said to have been set up originally as a memorial of the disafforesting of the Warren of Staines, by virtue of a charter of Henry III., which granted to the citizens of London, and all free tenants of the county of Middlesex, liberty of warren and forest in that district.

Another excursion, and one which, I believe, is a source of much enjoyment to the voyagers, is the annual trip of the Navigation Committee, to whom the conservancy of the banks of the Thames is intrusted. The lord mayor of London has been, time out of mind, bailiff or conservator of the river Thames. James I., by a charter, confirmed him in the office, the functions of which devolve upon the Navigation Committee, composed of common-council-men. The lord mayor appoints a water-bailiff, who is called the sub-conservator, and who, taking his instructions from the Navigation Committee, executes their commands. He controls and licenses the fisheries, superintends the repair of the banks, and keeps the bed of the river in fit state for navigation. Some time in one of the leafy months of summer, the committee make their annual voyage, to inspect his domain, and to see that Father Thames suffers no neglect at his hands, or wrong from evildoers. This important business, I am credibly informed, is never hastily slurred over or thoughtlessly undertaken. The barge which is to be freighted with the commonalty being first duly provisioned with all the requisites for an *al-fresco* collation, and with an assortment of wines, in bottles of all shapes, and suited to civic palates, is despatched in charge of the water-bailiff up the river as far as Reading, or perhaps up the Isis to Oxford. The members of the Navigation Committee run to the latter place, say, in the evening by rail, and, after a sunset ramble among the universities, and a becoming supper at the Mitre, pass the night in the arms of Alma Mater. Next morning, they embark on board the barge, and, drawn by a horse at a walking-pace, commence the voyage back to London, commenting, it may be, by the way, on the state of the river, and suggesting the adoption of any fresh measures necessary for the conservation of the banks, the dredging of the bottom, or the regulation of the fisheries. The chief characteristic of this return-journey is the deliberation with which it is conducted. The voyagers are seldom known to proceed further than Henley on the first day. There are a good many things to be looked into, and more to be got to the bottom of; and there are fortunately many pleasant shady nooks on the banks, where, in clear moss-bordered springs, claret is known to cool, in the course of an hour or so, to a state of delicious perfection. A table-cloth, spread upon the ground by the side of a rustic fountain, and garnished with a cold venison-pasty, a brace or two of

plump capons, and a Westphalia ham, with here and there a Strasburg paté standing upright among tall crystal goblets, into which the red juice of the Rhine-grape gurgles forth from sombre-coloured bottles responsively to the ripple of the fountain: such is the delightful mixture of nature and art which completes the summer landscape in the eye of the civic connoisseur. A lunch thus luxuriously partaken of is a thing to be enjoyed and remembered, and a worthy prelude to the dinner which comes off at Henley, whither a turbot or a fine salmon, or perhaps white-bait or turtle, have been thoughtfully forwarded from sympathising friends at the Mansion House, to enrich the larder of the landlord, and enable him to do honour to his guests. The party sleep at Henley; the next morning they embark again, and proceed with the same deliberation, and the same agreeable intervals devoted to the contemplation of nature under the most favourable circumstances, until they arrive at Windsor, or perhaps at Hampton. The third day wafts them pleasantly into the heart of the great city, and lands them at London Bridge, whence they return in peace to their families, grateful, it may be presumed, for having been preserved from the perils of the deep.

I could say something more on the subject of these aquatic excursions, and their excellent effect upon the river population and the river property; but too much writing somehow makes my head feel as though it did not belong to me; besides which, there is waiting in the shop a particularly good customer of mine, who will never be served by anybody but myself. So perhaps I am justified in leaving off here, and deferring the rest to another opportunity, if that should ever occur.

DANIEL DIRBS, *Chandler.*

IMPORTANCE OF ATOMS.

At no time in the history of science have molecular phenomena attracted more attention than at present. The discovery of new facts has added largely to the importance of the subject, and given to it a bearing which widens with enlarged experience. Most readers know that atoms or molecules compose the mass of all animate and inanimate creation: some, mixed, as it were, by accident, without plan, such as clods of earth and many kinds of rock, are classed under the head of *amorphous*. A second class is the *crystalline*, in which plan and system are apparent; the arrangement of the particles takes place in accordance with a certain law, each having a definite position in relation to all the others, and always producing the same forms in the same groups. The acorn does not more surely produce an oak, than do the atoms of crystals produce cubes, or hexagons, or pentagons, or polygons, according to their nature. A third class is the *organised*: in these the atoms are grouped with a definite purpose; they have an important part to play in the economy of nature, and they are constituted for special ends. Hence the molecules form cells, glands, tubes, muscles, &c., and make up the architecture of animal or vegetable life. The crystalline class appears to be the link which unites the amorphous with the organised.

Among the facts which recent investigation has brought to light, are several relating to the phenomena of heat and transmission of rays. A peculiar kind of glass will cause a divergence or bifurcation of a luminous ray passing through it; Faraday shewed that it would rotate a polarised ray. But with a different arrangement of the particles, the same effects could not be produced. Plücker's researches led him to find what is called a 'magnecrystalline axis' in crystals; that is, certain crystals take up a certain position when suspended between the poles of a magnet, according to the grouping of the molecules. The peculiar grouping is mostly due to pressure, and it is found that pressure in a different direction alters the behaviour of crystals and

other substances in the magnetic field. The transmission of heat is also more or less affected by molecular arrangement.

As organised bodies serve a special purpose in the great scheme of nature, we may naturally expect to obtain more marked effects when experimenting with them than with others. As Dr Tyndall writes—'Matter, in this aspect, may be regarded as a kind of organ through which force addresses our senses; if the organ be changed, it is reasonable to infer that the utterance will be correspondingly modified, an inference which is abundantly corroborated by experiment.' As we shall presently see, the results are singularly interesting.

Some twenty years ago, investigations were made as to the conducting power of wood for heat, when the general conclusion was arrived at, as might have been anticipated, that the conducting power was quicker along the line of the fibre, or with the grain, than in any other direction. The inquiry was not, however, carried on with the nicety demanded by experiments which require so much delicacy of observation and manipulation.

With the means afforded by advanced knowledge, Dr Tyndall has been able to avoid the imperfections of his predecessors. A small and highly ingenious apparatus contrived by himself has furnished him with a power of research he has turned to good account, as appears by his able paper recently published in the *Philosophical Transactions* of the Royal Society. The heat employed was that generated by a galvanic current; it was made to traverse in different directions a small cube of the substance under examination, while the quantity that passed through in a given time—sixty seconds—was measured by a delicate galvanometer. The whole apparatus is so perfectly at command, as to leave no room to suspect the presence of error. In all cases, the needle of the galvanometer was left to settle itself at zero before making a new experiment; contact was then made for sixty seconds by a stop-watch, after which the deflection of the needle indicated the amount of heat transmitted in a minute.

Fifty-four different kinds of wood were tried, and in each case the fact of the conduction being best in the direction of the fibre was fully verified. In the results there was, however, nothing to shew the existence of a law by which it might have been possible to predicate the disposition of any kind of wood beforehand. Density, as a rule, does not facilitate transmission of heat. American birch, which is a light wood, was found to conduct better than any other, while ironwood, which is close, hard, and heavy, stands low on the list. Oak and beech rank next to the American birch; Scotch fir and laurel, on the contrary, appear at the very bottom of the scale. In a few instances, transmission along the fibre was best in those kinds which conduct worst across the fibre; but the exceptions are too numerous to admit of laying down anything like a rule in this particular. The grand fact that comes out is, in scientific language, that 'wood has three unequal axes of calorific conduction, which are at right angles to each other.' The first is parallel to and in the direction of the fibre, and is the best; the other two which cross the fibres will not transmit so much heat by one-half to two-thirds. It is worthy of remark, that these agree exactly with the results obtained some years ago by Savart when he was investigating the phenomena of the sonorous vibrations of wood. 'The axis of greatest elasticity coincides with that of highest conductive capacity, and the axis of least elasticity with that of lowest conductive capacity.' These same axes have two other agreements not less remarkable—namely, those of cohesion, and of permeability to fluids. The best line of conduction is the best of cohesion, and the worst line of conduction—across the grain—is that of least permeability. Were the staves of a cask

made with the grain in any other direction than that which experience has proved to be the best, the fluids would speedily escape.

Perhaps the most interesting result of this inquiry, is the view it enables us to take of some part of the economy of nature. Knowing the different axes of heat-conduction in wood, we see how it is that trees endure great and rapid changes of temperature. Side-ways, or across the grain, they give off or take up heat but very slowly; hence it is long before their natural temperature is altered by external influences. And what is more, they are as much protected by their bark as a man by his over-coat, for the conducting power of the bark is from 3 to 5 degrees worse than that of the wood. Heat, therefore, neither penetrates readily from without, nor escapes readily from within.

Metals have hitherto been supposed to be the best conductors of heat; but a cube of rock-crystal, which is pure silica, gave a deflection of 90 degrees to the needle of the galvanometer, so great was the amount of heat that had passed in the sixty seconds; affording an evidence that there are few metals equal to silica in this respect. With a cube of gypsum, the deflection was not more than 19 degrees—about the same as some of the woods; and in these facts we see some of the causes which modify climate, and, in a secondary way, tend to the fertility or barrenness of a country. 'Let us consider,' says Dr Tyndall, 'for a moment the process which takes place from sunrise to the hour of maximum temperature in a region overspread with forests, and compare it with that which must take place in the African desert. In the former case, the heat, slowly and with difficulty penetrates the masses of wood and leaves on which it falls; and after the point of maximum temperature is passed, the yielding up of the heat acquired is proportionately slow. In the desert, however, the mass of silica exposed to the sun becomes burning hot as the hour of maximum temperature approaches; but after this is passed, the heat is yielded up with proportionate facility.' Thus is explained the great alternations of heat and cold experienced in the Sahara—an unendurable and scorching glare in the blaze of the sun at noon, during which animal and vegetable life seems to pant for mere existence; and at night, when the stars shine out in the clear sky, the intense heat of the day is succeeded by a chilling degree of cold. 'Were gypsum, however, the prevailing mineral, it is *a priori* certain that this could not be the case to anything like its present extent.'

The experiments tried on animal substances show that due provision has been made to adapt them to the circumstances in which they might be placed. Cubes of elephant tusk, walrus tooth, whalebone, and horn of rhinoceros and cow, transmit heat very slowly. Were the conducting power of ivory as good as we might suppose it to be, from its density and elasticity, the elephant would find his tusks an uncomfortable appendage under the burning sun of the tropics: they would become highly heated during the day, and cold at night; but as it is, the slow-conducting power of the tusks preserves the animal from the fluctuations. Knowing how hurtful sudden changes of temperature are to animal and vegetable life, we cannot fail to perceive the wisdom of the simple yet effectual means of protection. On this part of the subject, Dr Tyndall observes: 'The horns of the rhinoceros and cow, however, still more strikingly exemplify that fitness of parts which is presented to the student of natural science. In the latter case especially, the mass of horn in close contact with the skull, and therefore capable of transmitting heat directly to the animal's brain, must be attended with very unpleasant consequences, if horn were a good conductor. Given such a constitution, the substance fixed upon by our own enlightened intellect to furnish the animal with such weapons of defence, would be just such as nature has chosen.'

Coal, again, is a very bad conductor of heat, and coal, as we know, enters into the composition of animal and vegetable tissues; while with sealing-wax, bees-wax, sole-leather, glue, gutta-percha, India-rubber, filbert and almond kernel, boiled ham muscle, and raw veal muscle, there was no deflection whatever of the galvanometer needle—showing that all these substances are impervious to heat. They form part, more or less, of all animal and vegetable tissues, and we see that they are admirably adapted for their purpose of protecting plants and animals from sudden changes of temperature. The temperature of the human body is the same in all climates; and this constancy is no doubt due in the main to the non-conducting power of the skin. Were it a good conductor of heat, there are some mechanical operations which could not be carried on at all without a shield of thick gloves. Professor Boutigny would not be able to plunge his hand with impunity into a caldron of molten iron, were the skin as good a conductor as silica; and herein we perhaps may see why the fiery ordeal was endured at times with impunity. Long practice enables many artisans to handle metal or glass while yet at a temperature that would blister unaccustomed fingers. A few years ago, the Fire-king obtained great notoriety in London by shutting himself up in an oven with a pan of beef-steaks, and remaining until they were cooked and ready to be eaten. Dr Tyndall's inquiry gives us the explanation of these apparent marvels. 'The experiments of Chantrey and Blagden,' he says in conclusion, 'are often referred to as illustrations of the surprisingly high temperature to which the human body may for a short time be exposed without injury. The experimenters owed their safety to two things: to the non-conductibility of their tissues, and the non-conductibility of the air in contact with them. Were either of these materials changed, the experiments could not have been made. If air were a good conductor, and parted with its heat readily, their hands and faces would have shared the fate of the beef-steak and eggs, which were cooked in contact with tin in the same oven. Were their bodies good conductors, they would have become heated like the tin; the heat would have been transferred to the deeper tissues and organs, to the probable destruction of the latter. As it was, however, both the causes mentioned contributed to the success of the experiment, and a mere surface irritation was the only inconvenience felt.'

These researches, it will thus be seen, open an interesting field of natural science; one which amply rewards the patient explorer. Dr Tyndall is pursuing his investigations with skill and diligence. Though but a young man, he has already won for himself a distinguished reputation; and there is reason to believe, that he will be ere long enrolled among the professors at the Royal Institution in London, the place where Davy and Faraday won their high scientific honours, and where he in turn may win his.

THE FUNERAL PASTY.

The peasantry of Estremadura, to whose life and learning centuries have brought little change, still delight in their traditional story of Josas the muleteer, who lived 300 years ago, and was the best onion-roaster in the province. Josas was born at San Martinho, a small and ancient village lying deep among the hills beyond the Portuguese frontier. His father, who was more than suspected of being a Moor, had sought refuge there from the Spanish Inquisition; but after his death, which occurred when Josas was but thirteen, his mother, having repented of all her sins and married a true Catholic, would have nothing to do with Josas; fortunately, however, there was one that would. Old Senaro, the best muleteer and the cross-set man in San Martinho, adopted him in lieu of an only son who had

gone as a soldier to India and never came back. Under his tuition, Josas learned to drive mules, to roast onions, and at length (but the old man said he had no hand in that) to fall desperately in love with the vintner's daughter, Rosinda, whose equal for pride and beauty was not in the province.

This misfortune fell on Josas before he was eighteen. Afflictions of the kind come early in Estremadura. The youth's personal attractions were not numerous. It was popularly believed there was not a rat's dinner on Josas's lathy frame; and the sun and wind had so dealt on his long loose hair and brown visage, that no man could distinguish their colour from the dust of the Sierra. Nevertheless, having a stock of accomplishments not to be despised in San Martinho, Josas had hopes. He could dance with any youth in the village, sing with any muleteer on the mountains, and talk down the priest himself—never stopping for stories. With this artillery he besieged Rosinda as the mules and Senaro permitted. His throat grew hoarse with shouting love-songs all night under her window; his conscience groaned under a weight of fibs; half his earnings were spent in her father's wine-shop—the rest offered at her shrine in the shape of scarlet handkerchiefs and green ribbons. But the vintner's daughter had more wealthy suitors, besides, it was her glory to be cruel; and at the end of two years' hard service, Josas found himself exactly at the same height in his lady's favour as when his suit began.

He had so often assured her he would die, without executing the threat, that it now fell powerless on Rosinda's ear; and his despair on the last exhibition of her scorn might have gone beyond ordinary limits, if it had not been diverted by a series of more substantial troubles. First, his best mule—which Josas thought could walk up a church steeple—fell over the rocks, and broke its neck one morning; then the remaining two strayed away from their pasture; and in helping him to seek them through the burning noon and the chilly night, poor Senaro caught a fever, and died. Josas missed the old man, though his temper was bad. He could always escape the cudgel by a run; and being now left muleless and friendless, the youth resolved to leave the proud Rosinda and his native village. Who knew but he might find his mules, or better fortune, beyond the mountains? Accordingly, having filled his wallet with the largest and best onions in Senaro's garden, a few handfuls of garlic, a piece of goat's cheese, and a flask of the vintner's wine, he took leave of his neighbours, his friends, and his fair enslaver, and set forth from San Martinho with the good wishes of young and old.

Josas shaped his course eastward, and soon entered the Spanish portion of the province. All the country was known to him by many a journey. The shepherds gave him shelter in their huts among the hills; the swineherds in the woods shared their meals with him; but nobody had seen his mules, nor could he see any chance of a master. At length, in the noon of a sultry day, his path descended to the rich and cultivated lands that lie along the banks of the Vera. Laden vines and olives covered the slopes; corn waved on the lower grounds; castles and villages rose on all sides as far as his eye could reach; and close by the river, like a white-walled town, half shaded by a chestnut grove, stood the great and wealthy convent of St Yuste. Josas knew that convent was far too rich and grand to entertain poor travellers like himself—moreover, it was reported that the old king of Spain had become a monk within its walls; but hoping for a shade wherein to rest and roast his onions, the muleteer took his way among the chestnuts.

The old trees grew thick, and were full of wood-pigeons: what a dinner Josas could have made on some of them, but for the fear of sacrilege! Roasted onions were safer than that; and having found a convenient

spot in the heart of the wood, where the grass was dry and the withered boughs abundant, Josas collected a heap, kindled a fire with his flint and steel, and laid in the onions with all due precaution. He had scarcely seated himself on the mossy root of an old tree, and pulled out his cheese, when a rustling sound, which had been going forward at no great distance, was followed by a deep groan, and 'Alas! alas!' repeated in good Castilian, of which, thanks to the mules, Josas had some knowledge. Cautiously the muleteer rose, and peeping through the screen of leaves which separated him from the speaker, saw leaning against the trunk of a huge chestnut, a tall gray-haired man with a roll of papers in his hand. His bones were as bare as Josas's own; his lace-band velvet hat and doublet had an old-fashioned look, as if time had gone wearily with both them and their master—yet there was the true hidalgo air about him, and something of the soldier too.

'No wonder he groans with all that to read,' thought Josas, in whose simple mind reading was indissolubly bound up with masses, prayers, and penitential psalms.

'Alas! alas!' once more broke forth the stranger, turning over the papers in great perplexity—'what shall I do with this? O that his majesty could write better Latin!'

'Maybe he is hungry,' said Josas to himself, as the smell of his own now roasted onions reached him. If the muleteer had one virtue more shining than another, it was that of hospitality; and having heard of even grandees being sometimes in the above-mentioned state, he coughed to raise his courage, poked his head through the leaves, and said: 'God save you, signor! do you like roasted onions?'

'Where are they?' said the stranger, looking up with avidity.

'Here,' said Josas, 'in my fire. I have goats' cheese too, and a famous flask of wine. Noble signor, come and help me with my dinner.'

The noble signor made no delay. The onions were dislodged from the ashes with a stick broken into the form of tongs, the cheese and wine produced; and Josas never before imagined that a true hidalgo could make such a meal. To do him justice, he lost no time in talking till the cheese and onions were fairly finished, and the wine-flask almost empty; then there came to his eye a twinkle, and to his tongue a suppleness, which the best-born Castilian will experience in such circumstances.

'Friend,' said he, 'your wine is good, and your onions excellent. I may say, they will be no burden on my conscience, though this whole day is a solemn fast with us all, on account of his majesty's funeral, which he is to celebrate to-morrow.'

'Celebrate his own funeral!' said Josas; 'can kings do that?'

'Thou art simple, friend,' replied the stranger with a smile, the first Josas had seen on his face. 'I speak of my master, the most puissant Charles, sometime emperor of Germany, lord of the Low Country, and king of Spain and the Indies, who has lately become a brother of the order of St Jerome in yonder convent'—and he pointed to the white walls of St Yuste. 'I am his secretary; my name is Don Guilelmo de la Male: with my assistance, his majesty is writing the history of his own life. (Here he glanced at the papers, and gave a half-groan.) You don't understand Latin, young man?'

'Not I,' said the muleteer.

'But you can roast onions,' continued Don Guilelmo, 'and you carry magnificent wine. Give me another draught. I will make your fortune—ye shall be appointed chief-cook to his majesty. Do you know anything of dressing partridges?'

'O yes,' cried Josas; 'old Senaro taught me to cook them, feathers and all, under the wood-ashes. They were good in the harvest-time.'

'Your fortune's secure, young man,' said the don confidentially, putting the flask into his hand: it was quite empty now. 'Come to-morrow to the chapel of St Yuste; you will see a splendid business; and depend on me for getting you the place. Mercy on me! there's the bell for nones;' and Don Guilelmo dashed through the wood like a hunted deer, as the boom of the convent bell proclaimed its noonday service.

Josas wished the hidalgo had not found the wine so good, and had left him a little; but the promise of his fortune being made, comforted the muleteer, and he sat meditating on his future position when appointed chief-cook to the puissant Charles. 'I understand the roasting of onions anyway,' thought Josas; 'as to the partridges, I'm not so sure about them, but doubtless there will be somebody else in the kitchen; they will do the work, while I pocket the wages, grow a gentleman, and marry Rosinda. She cannot refuse the chief-cook of an emperor!'

With a vision of the reverence which all San Martinho, including the vintner and his daughter, would render him, Josas's head drooped back against the chestnut, and he fell fast asleep. Fortunately, no adder came that way, and there wasn't a wolf in the neighbourhood; but when the western sun was sending his red rays through the foliage, old Balthazar, who had watched the wood-pigeons and hewed fuel for the brothers of St Jerome more than thirty years, woke up the traveller with a sturdy shake, admonishing him that the dews fell heavily beside the Vera, and that there was less risk of ague or fever in his hut. Josas accepted the rough-and-ready invitation, and the woodman led the way to his dwelling. It was a log-built cabin, the roof and walls covered with a great vine, and standing in a grassy dell of the woodland. There were two olive-trees behind, and a barley-field in front. There old Balthazar and his daughter Antonia lived content and busy, with their great dog Simmo, their two cows, and a herd of half-wild hogs they kept for the convent. Prudent Spaniards, under Balthazar's circumstances, in those half-Moorish days, would have hesitated at taking home a stranger, but the woodman and his daughter were too humble and honest for the extreme proprieties. Antonia helped to till the barley-field and gather the olives, managed the cows, looked after the monks' hogs, and sat spinning at the cottage-door as they approached—a strapping damsel, in her russet kirtle and close fillet, very unlike Rosinda. Her father's guest was kindly welcomed, though his capacity, as exhibited on the barley-loaf and bacon of their supper, somewhat astonished her. Travellers were scarce in that quarter; and it was a great opportunity for the woodman and his daughter to tell their news, since Josas had none: how the convent chapel was to be hung with black, and illuminated with 300 tapers, while the emperor's funeral-service was performed for the good of his soul; and lords and knights were coming from leagues round to see it on the morrow. Josas was about to open the budget of his hopes, and Don Guilelmo's promises—for he perceived they regarded him as a rustic who knew nothing of high life—when Simmo, which lay before the crackling fire, opened his jaws with a long and friendly bark, as the woodman's latch was lifted, and a youth wearing a monk's hood and frock, but looking marvelously like a man-at-arms, stepped in.

'Whither so late, Jago?' said Balthazar. 'I thought the convent-gate was always closed at vespers?'

'So it is,' said the youth. 'But I have been sent to inquire after a stranger with whom Don de la Male talked to-day in the woods.'

'I am he,' said Josas, rising with no little pride.

The youth looked amazed, but instantly recovering himself, said in a respectful tone: 'Then, signor, it is the don's command that you repair with me to his presence.'

Bidding the astonished woodman and his daughter a

patronising good-night, the muleteer followed his guide in judicious silence through a winding woodpath, an outward postern, and a covered-way which admitted them to the kitchen-garden of the convent. It was reckoned the best in Spain; and by a walk bordered with garlic, whose scent made his teeth water, Josas was conducted to the back-door of that wing which Charles V., sometime emperor of Germany, &c., had chosen as his retreat from the pomps and vanities of the world. At the back-door he found Don Guilelmo, looking as if the vintner's wine had left him nothing but its lees.

'Welcome, honest youth,' said the secretary, like a man endeavouring to reassure himself by talking. 'I have spoken to his majesty, and he desires to see you. You can manage partridges: remember you told me so. For the Virgin's sake,' he continued into Josas's ear, 'do your best, or you and I shall be ruined!'

Mentally resolving to avoid that calamity if possible, though heartily wishing himself back in San Martinho, the muleteer followed Don Guilelmo across a hall, up a stone stair, and through five rooms hung with black and tenantless, to a still more gloomy chamber, where three grave gentlemen stood each at a corner of a state-bed, on which, propped up with innumerable pillows, sat one whom Josas would have called a stout old signor, attired in a monk's gown lined with ermine, with a richly-illuminated psalter in his left hand; while the right, shapeless with the gout, and wrapped in Indian handkerchiefs, rested on a cushion of embroidered velvet. It was Charles V., with his physician Matheoso, his confessor Borja, and his chamberlain Don Quixada. The chamber was lighted only by a great open window opposite the bed, and looking down into the choir, where the monks and the rest of the royal household still remained, though vespers were over, practising a certain chant which was to form part of the grand service next day.

Charles reigned at Yuste as he had never done in Germany, Spain, and the Indies. There were no Protestant princes there to dispute his will, no Luther to defy, no Francis I. to rival him. The abbot said, his example in devotion and good eating edified the whole convent. Seigneurs from every corner in Spain vied with each other in sending him choice delicacies, which he relished in spite of the gout and Dr Matheoso; attending, nevertheless, to both prayers and fasting, obliging his household—all but those of noble birth—to wear the monastic garb, and keeping the entire convent, for at least a month, busy in preparations for a funeral-service in honour of himself. On the eve of this solemnity, a calamity more serious than gout or physician had overtaken the mighty Charles. His chief-cook had fallen sick that week, and his second thought proper to run away—some said from homesickness—that very morning, an hour after the arrival of a basket of partridges, fattened by an Andalusian grandee on dough made of ground almonds, and intended for a pasty at the compensating supper which was to succeed the emperor's funeral, with its foregoing herbs and fasting.

Three couriers had been despatched to as many cities in search of somebody capable of cooking such partridges; but the fear that none of them would return in time troubled the imperial mind and household, till hope was rekindled by Don de la Male. The secretary was a noble by birth and a scholar by learning, but no one had ever seen him talk to his imperial master with such confidential familiarity as after nones that day; and the result was, a command privately given when vespers came on, with no sign of a returning courier, to seek out the cook he had met with in the wood.

'Ha, Brother Pedro!' cried Charles, stopping his chant, 'that screech would mar the music of angels. Is this the young man?' he continued, as Don Guilelmo took his place at the fourth corner; and Josas, obedient

to his signal, approached, bowing every step. The muleteer knew not on how many of Europe's battle-fields and council-halls that glance had fallen; but it grew keenly earnest as, measuring him from head to foot, the conqueror of Pavia said: 'Young man, you know something of partridges, and had, as we hear, a noble teacher. The illustrious rank and lineage of Don Senaro have escaped our memory, which indeed grows weak through years and sickness; but doubtless he was skilful in the table. Tell us, on your conscience, did he boil with Valencia wine or Canary?'

'Valencia,' said Josas, who rather preferred that liquor.

'Did he sprinkle with saffron or garlic?'

'Both,' said Josas.

'Good!' said the emperor: 'he was an instructor. Young man, we will intrust to you our choice partridges. To-morrow, after the solemnities, let them appear at our table in a pasty compounded in your master's best style. The office of our chief-cook depends on that pasty. Brethren, let us proceed with the chant.'

The canons of cookery at that period were somewhat different from those now in repute, and modern aspirants would not be benefited by a minute detail of the partridge-pasty as given by Don Guilelmo to his protégé, when the almond-fed birds had been delivered by the chamberlain into Josas's custody with the ceremonies deemed proper on such occasions, and the rest of the establishment had retired to be ready for matins still earlier than usual. Suffice it, therefore, that the process began with a boiling in Valencia wine, and terminated with a sprinkling of garlic and saffron. All the intervening particulars were known to Don Guilelmo, for, next to a lamprey-pie, it was the emperor's favourite dish; and the secretary knew that he was compromised. As for Josas, things had gone so swimmingly, that although he did not yet believe in the illustrious lineage of old Senaro, his faith in himself was almost perfect. After a sound sleep and a considerable breakfast, our muleteer fell to the partridges with good courage about noon next day, being left sole occupant of the imperial kitchen. How the funeral solemnities proceeded, together with the display of riches, relics, and good company made by the convent on that occasion, may be learned from the chroniclers of the period. Our business is with Josas in the kitchen. It contained many conveniences unknown to his early instructor: he lamented Senaro over the flour, wine, and spices so liberally placed at his disposal, and chiefly over a mess of cow-heel, suet, and great onions, which stood stewing by the fire for the scullion's supper.

When high mass commenced, Josas had set the partridges to boil in the Valencia, reserving about a pint for his own consolation, which, having discussed, together with a dish of the said stew, it occurred to him that he might take a little rest on one of the kitchen benches. The wine was strong, the day was warm, and the music came sweet and solemn from the chapel—an intervening court had been left open by imperial forethought, that the cook might be edified, and doubtless Josas was; but when the first dirge floated over plain and woodland, Antonia, who sat spinning at her father's door, because somebody must keep the hogs, was startled by his appearance with hair erect and terror-stricken face, exclaiming: 'I'm ruined! Don Guilelmo and I are both ruined!'

'What has ruined you?' said Antonia, looking up from her wheel as if she thought that consummation impossible.

'I fell asleep, and the partridges are burned to a cinder!' cried Josas. 'Will you hide me?'

'I can't commit sacrilege,' said Antonia with a glance at the wood-pigeon; 'but there is something here'—and she darted into the cottage.

Josas followed her instinctively. In the corner sat a brooding hen. How near her maternal hopes were

to their accomplishment the muleteer never learned; but wringing the neck of the unlucky fowl, Antonia thrust it under his skirts, saying: 'Run as fast as you can, boil that in wine, and send it up in a pasty: great people never know what they are eating.'

With the last words, she pushed him out, and Josas ran back to the kitchen.

A pasty was sent up to the emperor's supper that evening after his funeral—a pasty which thenceforth became a landmark in the imperial life. Don Guilelmo gloried in his cook. The physician in attendance on his sovereign inhaled complacently the rich flavour of almonds which the birds retained; and Charles declared, with his usual deliberation, that more tastefully-boned, or better hashed partridges he had never eaten—only they appeared to him a little rare.

The humility with which Josas heard that flattering judgment when announced to him in due form by the chamberlain's page, astonished the brothers of St Jerome; but they were still more surprised when, on the arrival of the three couriers with an equal number of cooks, he craved on bended knee to be excused from further attendance in the imperial kitchen. As among the new-comers there was one master of lampreys, the muleteer's *congé* was graciously granted, with a present of fifty crowns.

Dr Matheoso said that was the only pasty he ever knew to agree with his majesty, and Balthazar never found out what became of his single hen; as for Josas, it cost him three days of meditation how he should dispose of himself and the crowns—the latter being his chief puzzle; but at length, for reasons which neither the vintner, his daughter, nor all San Martinho could ever divine, a wedding was celebrated at the woodman's cottage, and he settled down to watch the hogs and pigeons. The duplicate of that imperial funeral was performed within the next six months by the abbot and monks of St Yuste. Antonia continued to spin for years after at the cottage-door, but her husband never cared to roast even an onion, and on no terms could he be brought to talk of partridges or look at a pasty.

ANTIQUARIAN DELUSIONS.

It is not long since antiquarianism was regarded by the world at large somewhat in the light of a 'solemn sham,' and its votaries as pedantic and anile visionaries. We will not venture to deny that a judgment even so harsh was founded in justice, for in nearly all the antiquarian literature of a date older than the last five-and-twenty years, there was nothing which could recommend itself to any one who reasoned with the slightest degree of precision. Indeed, before the present generation, antiquarianism was a vague indefinite dream, a chaotic jumble of opinions and theories—in fact, anything but a science. Though errors in system, such as mistaking cromlechs for altars, stone weapons for sacrificial instruments, and such like, have gradually passed away, still misconceptions sometimes occur, even where positive facts are concerned. It was Hook, we think, who portrayed in his *Fathers and Sons* a pompous auctioneer glorying in the authorship of an essay 'On the Shape of the Handle of the Arch-Druid's Pruning-knife,' which is lugged in at intervals throughout the whole novel. Here the force of the satire depends upon the supposed trivial character of the subject desecrated on, and the excessive vanity of the writer. How different is the result when a weak point—the false interpretation of an inscription—recognised as peculiar to the study in question, has been seized upon and turned to advantage by the skilful pen of Scott or Dickens, for then the laugh is raised not merely against Mr Oldbuck or Mr Pickwick, but against antiquarianism, of which for the time being they are the personification and embodiment.

It is possibly the charitable opinion of many, that the amusing sketches in which are depicted the respective discoveries of Monkbarns at the Kaim of Kimprunes, and of Pickwick at the village of Cobham, are gross caricatures; but truly they are not so, since parallels may be found in the writings of sober, sedate, and learned gentlemen, whose zeal to penetrate the dark obscurity of the past has dimmed their usually clear perception. If we now recall a few of those extravagances, let it not be understood that we do so in the spirit of malicious ridicule; on the contrary, our sympathies are entirely with labourers in the field of antiquities, whose shortcomings we are always disposed to treat with some degree of consideration; but still, as their very errors form an instructive chapter in the history of their study, it is not unbecoming to drag them occasionally to light, if for no other reason than to serve as a warning to succeeding authors, and to impress upon them the indisputable necessity of exercising the utmost caution in conducting researches and arriving at conclusions.

The first, and perhaps the most outrageous hallucination which occurs to us, was of Irish origin. A curious inscription, engraved in extremely archaic characters, was discovered in Kilkenny, and forthwith chronicled in a statistical survey of that county, from whence its description was transferred to Gough's edition of Camden's *Britannia*. The interpretation was not wanting, and BELI DIVOSE, indicating a dedication to the divinity Bel, or the Sun, was declared to be the true reading. A few years elapsed, and Dr Wood, a very respectable writer, who involved himself, however, in ethnological paradoxes, had occasion, in his *Inquiry concerning the Primitive Inhabitants of Ireland*, to incorporate along with his other evidence the above inscription; and he tells us, that the fact of its having been composed in 'old Pelagic letters, and found in the dominion of the Brigantes, evinces the ancient Gallo-Grecian source whence these characters emanated, and the accompaniment of British Druids with British tribes.' After having indited a sentence such as this, it may well be imagined with what pleasurable sensations the learned doctor found himself under the necessity of prefixing to his volume the intelligence, that 'since those pages were struck off, Mr Townley Richardson has ascertained, by strict investigation in the vicinity of the place where the inscription in question was discovered, that the words, being reversed, signify *E. Conid 1731*—a person who, it seems, in place of having been a deity, was only a cutter of millstones.' Such was actually the fact—Mr Conid's name, turned upside down, having been rendered *Divose*, and the numerals converted into *Beli* by a similar process. Truly Mr Pickwick's 'Bill Stumps his mark' was a trifle to this. Before taking leave of Ireland, we cannot refrain from remarking on the extreme uncertainty which appears to attend the elucidation even of her genuine relics of ancient lore—the Oghams. In one instance, which is not singular of its kind, 'an inscription of only nine letters has been translated in seven different fashions.'

The northern Runes are, it may be said, the Teutonic representatives of the Celtic Oghams, being, like them, by no means easily deciphered. They have been the objects, however, of more attention, and further progress has been made towards fixing determinate rules for their interpretation: nevertheless, they have been the subject of many ludicrous mistakes. One, which has a place in the *Antiquitates Americanae*,† owes its

existence to some transatlantic savans. A large boulder in Massachusetts was supposed to bear upon its surface evidence of the early discovery of *Vinland*, or North America, by the Norsemen, as recorded in the Saga literature. The stone is covered with endless markings of the rudest description, which had oftener than once been copied by diligent inquirers without yielding any material result, until the Historical Society of Rhode Island conjured up from among the meandering lines the undoubted letters O R F I N, in regular sequence, which they modestly suggested were the palpable holograph of the Norse colonist, Thorfinn Karlsefne. It was not long till these gentlemen received what would in another field of controversy be called a 'facer,' on its being pointed out by some malicious adversary that the characters of the alleged inscription, as delineated by them, were undisguised Roman; wherefore, in all probability, the legend was not above a hundred years old.

The beautiful cross at Ruthwell, in the south of Scotland, was long a subject of fruitless speculation. The extreme elegance of this relic excited universal admiration; but the mystic characters engraved along its sides, mocked every ardent aspiration to discover their meaning. An erudite Icelander, Mr Repp, formerly resident in Edinburgh as sub-librarian to the Faculty of Advocates, attempted to force them to yield up their secret, which, according to his rendering, was a very uninteresting affair after all. The inscription, he said in a Latin letter, printed in the fourth volume of the *Archæologia Scotica*, was intended to intimate to future generations, that 'a gift for the expiation of an injury, of a baptismal font, of eleven poundweights, was made by the authority of the Therfusian fathers, for the devastation of the fields of Ashlafardhal.' Antiquaries were amazed that an obelisk so richly elaborated and so valuable should have been reared to record an occurrence so trifling; and scepticism gained strength when the most persevering diligence could not discover the slightest trace that such names as Ashlafardhal and Therfusa had ever existed in the neighbourhood of Ruthwell, or indeed anywhere else. Assistance in this difficulty came direct from the head-quarters of Runic lore, in the person of Professor Finn Magnussen of Copenhagen. Rejecting Mr Repp's rendering of the inscription, he extracted from it what he conceived to be sufficient evidence, that not the gift of a paltry basin, but the transference of lands consequent on a marriage, was what the Ruthwell monument commemorated. A long explanatory and historic narrative, respecting the various individuals mentioned in connection with the alleged marriage, concluded Mr Magnussen's communication to the Society of Northern Antiquaries. A few philological observations were likewise interwoven in his carefully-prepared dissertation; and while in one place he informs us that the inscription was 'a confused compound of Old-Northern, Old-Saxon, Anglo-Saxon, Frisian, and Belgian,' in another we are told to regard it as a real specimen of the ancient language of the Picts, into whose mouths John Pinkerton himself would scarcely have ventured to thrust so singular a jumble.

A third reading of the legend on the Ruthwell cross was presented to the learned world by our countryman, Mr Kemble, who saw in it nothing either of the monks of Therfusa and their font, or of Aslof and her betrothed Ermen.* The inscription he understood to be a fragment of Anglo-Saxon religious poetry; and he was right; for, some years thereafter, an allegorical poem in that language was discovered in Italy, which contained the very passages Mr Kemble had

* This individual case we give on the authority of Mr J. Windele's paper on the Ancient Irish Oghams, in the *Uster Journal of Archaeology*, Part I.

† Published by the Society of Northern Antiquaries of Copenhagen. With reference to the Delight rock in Massachusetts, the Preliminary Dissertation to Laing's translation of the Heimskringla may be consulted, although it is inconsiderately severe on the antiquaries.

* Finn Magnussen's interpretation of the Ruthwell inscription may be found in the *Report of the Society of Northern Antiquaries to its British and American Members*, and Mr Kemble's in the *Archæologia*, vols. xxviii. and xxx.

translated from the obelisk in question; and certainly, as Dr Wilson remarks in his *Archæology of Scotland*, 'no confirmation of the accuracy of conclusions previously published, could well be more gratifying or satisfactory than this.'

At Runamo, in Bleking, a province of Sweden, there is a rock which was long supposed to bear a Runic inscription, relating to the battle of Braavalle, one of the most important contests recorded in the whole history of the north. As early as the days of Saxo Grammaticus, this rock had excited attention; and down until recent times, it was visited and pondered over by numberless antiquaries of various countries. Every effort to read it proved vain; nor was even a conjectural interpretation advanced till a comparatively late period. In 1806, the antiquarian world was scandalised by a declaration from a Mr Arendt, that the supposed characters were merely natural indentations. Giving no credit to this solution of the mystery, a commission of three professors, with Finn Magnussen at their head, appointed by the Royal Society of Sciences of Copenhagen, once more attacked the rock in 1833. They soon satisfied themselves that the curiosity was historical, not mineralogical; and their acute vision detected distinct artificial characters, the graphic handiwork of man. These were carefully copied, and the drawings delivered to Professor Magnussen, from whose matchless penetration and experience in those matters everything was to be expected. For ten months did he pore over the rude and crooked scratches, animated, no doubt, with the hope of accomplishing what all the Runic scholars of Europe for generations had been unable to achieve: for ten months, we say, did he rack his ingenuity, but to no purpose; and he had nearly confessed himself beaten, when a ray of inspiration flashed upon his troubled brain on the 22d of May 1834, and in two hours thereafter the Runamo mystery was unveiled.

Many and various are the ways in which the letters of Runic inscriptions are disposed. Generally they follow each other in regular succession from left to right; but sometimes they are piled one above another, or ranged round the circumference of a circle, or stowed away in other eccentric positions. There was another possible method of arrangement, however, which, though no example was on record, it occurred to Professor Magnussen might be that adopted on the Runamo rock—namely, a complete reversal of the usual order; and this was the happy idea which led to what he was pleased complacently to regard as his valuable discovery; for, on reading the supposed inscription backward—that is, from right to left—the following coherent and lucid verses, all 'in regular measure of the sort called *Fornyrthalog*,' were clearly made out:

'Hildekin received the kingdom
Gard hewed out
Ole took the oath
Odin consecrate these Runes!
May Ring get
A fall on the mould;
Elves, gods of fidelity,
Ole hate,
Odin and Frey
And the Aser race
Destroy (destroy)
Our enemies!
Grant to Harald
A great victory!'

The worthy professor was not long permitted to enjoy his triumph unchallenged. Berzelius, the celebrated chemist, like Arendt, denied the existence of any other marks upon the rock than those engraved by nature—a deliverance which went forth to the world with all the authority of the great man's name. Finn Magnussen and his colleague Forchammer, in a

work published by the former as supplementary to, and more comprehensive than, his previous essay on the Runamo relic, protested against the dictum of Berzelius, which was nevertheless immediately reiterated and supported by Professor Nilsson of Lund. A very spirited controversy arose, the steps in which we will not weary our readers by tracing, the last and conclusive one being sufficient for our purpose. For it we are indebted to Mr Worsaae, whose *Runamo und die Braavallenschlacht* has set the question at rest. In this work, along with a series of well-supported arguments, there are accurate lithographs taken from rubbings, executed with great care; and these delineations viewed in conjunction with the relative statements in the text, leave no doubt that Finn Magnussen's alliterative stanza in the *Fornyrthalog* measure, was actually a mineralogical phenomenon produced by the action of the atmosphere!

We have already observed, that the deciphering of ancient monolithic records (if the phrase may be allowed), is not properly the work of antiquaries, or archæologists, applying this name in the restricted sense now generally understood; but still they seem scarcely inclined to relinquish their prescriptive right to conduct researches of this nature, and they cling to it with a degree of tenacity which is perhaps to some extent excusable. We say excusable, because it can scarcely be a matter of surprise that men who have to depend upon induction and inference for expiating long-forgotten facts, should wish to be enlightened as far as possible by the revelations of positive and direct evidence. Incited by the hope of obtaining assistance so valuable, antiquaries will probably continue to take inscribed monuments under their especial charge, although the results hitherto derived from the examination of these are by no means such as to warrant their expectations. Indeed, Scandinavian archæologists are agreed, that extremely little of importance either to them or to historians can be gleaned from the several hundred Runic inscriptions already interpreted; and the Oghams may safely be classed in the same category. Nevertheless, these interesting relics have their value; and the philologist who cares to study the laws of linguistic progression and change, but not the archæologist, will find it worth his while to grapple with the difficulties they present, and even to run the risk of earning a niche in the temple of fame beside the too clear-sighted hero of the Runamo rock.

Though antiquaries have been guilty of egregious errors in their assumed character of inscription-readers, they have likewise, in their own particular walk, been the victims of the most fanciful delusions. It would be needless in these pages to insist upon a fact so patent to all in any degree familiar with the older writers on antiquities, whose theories, based for the most part on the wildest conjectures, were a series of rash guesses, whose chief element was the religious. In this country, every primeval relic was dubbed druidical; and so universally was this title applied, that there was some justice in Macculloch's flippant remark in his *Letters on the Highlands and Islands*, that 'when once an antiquary gets himself mounted upon a druid, it is impossible to imagine where he will go, and when he will stop.' The worship of Thor and Odin supplied the same groundwork for theorising in Scandinavia and West Germany that druidism did in Britain; while in East Germany and Bohemia, the Slavonian mythology was most in favour. Many years ago, the antiquaries of these two last-named countries were imposed upon by some spurious images which were palmed upon them as Venish gods; and until a very recent period, they cherished with the utmost veneration the central portion of a large church-candlestick, believing it to be the throne of an old pagan deity!*

* See Worsaae's *Nationale Alterthumskunde in Deutschland*.

But, as we have formerly mentioned, the graver errors in the system have been supplied, and we are not now often startled by the enunciation of any peculiarly preposterous nostrum. There is one, however, of recent promulgation, which, it seems to us, has rarely been equalled in pure extravagance. M. de Perthes, while conducting certain elaborate researches in alluvial banks in the neighbourhood of Abbeville, dug up heaps of flints on several occasions. These he subjected to the most careful scrutiny, and decided that they were actually a series of portraits!—the *penates*, probably, of a rude and barbarous people. For, one piece of flint, he says, is the palpable representation of a human head and countenance, another of a dog, and so on with other animals of the lower creation. He has engraved many specimens in his *Antiquités Celtiques et Antédiluviennes* by way of illustration; and, certainly, the appearance of some of them approximates considerably to the prototypes he assigns for them; but then every one knows how the hand of the artist, even when there is no intention to deceive, may be so far guided by his imagination as to delineate an object before him according to the conceptions he may have formed of it. In short, it seems very evident that M. de Perthes's marvellous discovery was simply an optical illusion—just as one contemplative old lady will detect in her Christmas fire a striking phantasmagoric panorama, imperceptible to another; or, as the guides to the wonderful caverns of Adelsberg, in Carniola, point out, among the clustering stalactites, resemblances to the Virgin and Child, which, though no doubt perfectly apparent to their catholic eyes, were in most instances, we distinctly remember, invisible to ours.

Such singular exhibitions as that to which we have just alluded, are now happily rare among antiquaries, nor are they likely to occur very frequently in future, for archaeology has firmly taken root, and a true sense of its mission is generally diffused. But even though some of its students should occasionally be guilty of eccentricities, and though its earlier history may be marked by many an absurdity, still no man of judgment will henceforth venture to assail it with ridicule, unless he is prepared to laugh also at all the other sciences because they did not, Minerva-like, at once spring forth in their full development.

CAFFRARIA.

FOR rather more than two years the British Empire has been at war with a small tribe of barbarians in South Africa. The hostile tribe numbers, including women and children, about 50,000 persons. The British Empire has a population of 180,000,000, more or less. For some time the empire seemed likely to come off second best in this contest. At one period the intelligence from the seat of war was so discouraging, that the funds fell in consequence—a remarkable fact, considering the description of enemy with whom we were contending. Of late, the advices have been more favourable, and there seems really to be a likelihood that the war will terminate before long in the triumph of the British Empire. Many persons, however, who profess to be well informed on this subject, are of opinion that the peace will prove to be only a temporary suspension of arms, and that, in a few years hence, unless better precautions are taken than have ever yet been in use, there will be another outbreak of this warfare as sudden and as destructive as any of those that have already occurred.

Without undertaking to enter into this question, we may attempt to give some account of the people with whom these hostilities are carried on, and the country which they inhabit. A book which has lately been

published on the subject will afford more detailed information to those who desire it.* The particulars which follow are, however, derived for the most part from other sources.

The word which is variously spelt Caffre, Kaffir, and Kafir, is an Arabic term, meaning an infidel, or a person who refuses to acknowledge the deity. Its proper pronunciation would be represented in English as nearly as possible by the spelling Kâh-feer, with a strong accent on the first syllable. The missionaries, in their Italianised orthography, write it Kafir. But the people to whom we apply it do not recognise it at all, except that they have a vague notion that it is in some degree a term of reproach. The Arab traders for many centuries, perhaps from the time of King Solomon, have been in the habit of visiting the eastern coast of Africa, whence they carried away gold-dust, precious gums, ivory, and slaves. The natives of the country were called by them Caffres, or heathens. On some old maps, the whole eastern coast of Africa is styled 'the Land of Kafir.' At present, curiously enough, the name is restricted, in common parlance, to the natives inhabiting the southern part of the coast, which lies between the Cape Colony and Natal, and which the Arab traders probably never reached. The natives themselves have no general name for all their tribes. There are Kosas, Tembus, Pondeos, Fingoes, Zulus, and various other clans, speaking similar languages, and doubtless descended from a common ancestry; but as there is no designation which includes them all, Europeans have continued to use the Arabic term, even when it involves an apparent absurdity. Thus we read in missionary books of Christian Caffres, which, when translated, seems to mean Christian infidels! But, after all, the misapplication in this case is not greater than in the now classical name of the American Indians.

Caffraria contains about 20,000 square miles; it is therefore equal in extent to about two-thirds of Scotland. The inhabitants are estimated at between 300,000 and 400,000; we, however, have not been at war with all these, but only with the fifth or sixth part of them. Our chief enemies during the recent war have been the Gaikas, who are a clan of the Kosa tribe. They have been aided by some smaller divisions of that tribe, as well as by a good many Tembus or Tambookies, and some Hottentot rebels from the eastern part of the Cape Colony. The Hottentots of the western part of the colony have been faithful; several thousands of them volunteered to serve against the enemy, and made tolerably good soldiers.

The Gaikas, together with two or three allied tribes, inhabit the portion of Caffraria bordering upon the eastern frontier of the Cape Colony. This territory is about 4000 miles square, and is now known as British Caffraria. It is, in fact, considered a British province, and is under the government of a military officer of high rank, who is termed the chief-commissioner. He resides at King William's Town, which is the capital of the province. Under him are subordinate commissioners or magistrates, who are stationed in different parts of the territory, and dispense justice among the inhabitants, both natives and English. The English, except the soldiers who garrison the forts, are principally

* *Kaffraria and its Inhabitants*. By the Rev. Francis Fleming, M.A., Chaplain to Her Majesty's Forces in King William's Town, British Kaffraria. London: Smith, Elder, & Co.

traders. Most of these are at King William's Town, which, from a small military post, has increased, within the last three or four years, to a place of considerable commercial importance. Its port is East London, about forty miles distant, at the mouth of the Buffalo River, where also there are several mercantile establishments. The roadstead at East London is indifferent, and the landing is dangerous; but both, it is said, may be considerably improved at a small expense, by a breakwater and other works.

Caffraria is a much finer country than the Cape Colony. The soil is not, perhaps, more fertile, for the soil in most parts of the colony is very productive when irrigated; but Caffraria has the advantage of more frequent and more regular rains. After a few days of rain, the whole country blooms like a garden. The plains and hillsides, where they are not covered with bush, are carpeted with rank grass, and bespangled with innumerable flowers of many kinds, some of them very beautiful and fragrant. But the bush is the most notable peculiarity of Caffraria. This term must not be confounded with our common English word meaning a small tree. It is the Dutch word *bosch*, signifying a wood or forest. Our English word *bushy* and the French *bosquet* are probably from the same root. The Caffrarian bush is sometimes an open grove of mimosas; but it is more commonly a dense jungle, in which trees, bushes, and shrubs, of all sizes, grow thickly together, and are interlaced by large vines—the whole forming an almost impenetrable mass. Thorn-bushes and succulent plants are particularly abundant. The former make it next to impossible for a European to traverse the bush except along the open paths, while the lithe and tough-skinned natives can creep like ferrets in almost any direction through it. The succulent plants, among which the *euphorbia*, or milkwort, is conspicuous, render the work of clearing away the bush much more difficult than it would otherwise be. In most countries, where droughts occasionally prevail, a forest can easily be burned; but as for the Caffrarian bush, you might as well try to burn the Thames. It is in these jungles that the natives, in time of war, find their places of refuge, which are almost inaccessible to European troops. This is one reason why our Caffre wars have been so remarkably prolonged. A few hundred determined men, lurking in these wooded fastnesses, may protract a contest for months against a large army.

It is an interesting question, whether the Caffres are likely ever to be brought into a settled, orderly, and peaceable condition; in other words, whether they will become a civilised people, or are destined to disappear gradually, like the aborigines of North America and Australia, in the progress of colonisation. The frequent and desperate wars which we have had with them, might lead one to apprehend that this deplorable fate of extermination awaits them; but, happily, there are other and stronger reasons for adopting the contrary opinion. The destiny of communities, like that of individuals, depends mainly upon their character; and character is determined in a considerable degree by race or descent. If the Caffres were of the same character and race as the Red Men of America, or the blacks of Australia, it might be doubted, judging from experience, whether the most philanthropic efforts on their behalf could save them. Penn tried the experiment at his Quaker settlement in America; but though wars were avoided, and the whites and natives lived together on the best of terms, the wild roamers of the forest would not alter their habits, would not betake themselves to agriculture or other settled pursuits; and as the game disappeared from the forests, they also passed away; so that there is not now a single Indian to be found in the whole state of Pennsylvania.

In like manner, the attempts made to preserve the aboriginal tribes of Van Diemen's Land from extinction have altogether failed. These facts naturally lead us to inquire what may be expected from the character and probable origin of the natives of Caffraria.

Some travellers have expressed the opinion, that the Caffres are a people of Arab descent. The late Sir John Barrow, an eminent authority, entertained this notion. More than fifty years ago, Mr Barrow, then a young man holding the office of secretary to the governor of the colony, visited one of the Caffre tribes, and gave subsequently, in his book of travels, a description of the people which has led to very erroneous opinions concerning them. He had before that time had no opportunity of seeing any individuals of the negro race except in the capacity of servants to white men. He knew them only as a meek, peaceable, and servile people, remarkable for anything but good-looks. When, therefore, he saw for the first time a tribe of free and high-spirited African warriors, finely-formed men, stately in bearing, bold and yet courteous in speech and manners, he could not believe that these were of the same race as the humble and despised negroes. True, they had black or bronze skins, and woolly hair; but except in these peculiarities—rather striking, one would suppose—they differed altogether, in his opinion, from other natives of Africa; and he suggested that they might prove to be, at least in part, of Arabian origin. Later writers have followed up this conjecture, and one of them considers that 'there are good grounds for supposing that the Caffres are of Ishmaelitic descent.' This supposition, however, is liable to the same objections which Washington Irving has suggested against the hypothesis that the American Indians are the descendants of the lost tribes of Israel—the Ishmaelites, if they were really the progenitors of the Caffres, must have come away from their native country in such a hurry, that they left, not only their complexions, but also their language behind them. The Caffre language has been carefully studied by the missionaries, and it is found to be a pure negro tongue, very similar to that which is spoken by the people of the Mozambique coast and of Lower Guinea. In short, the inhabitants of Caffraria are, in appearance, customs, character, and language, not to be distinguished from other African negroes, except by such traits as local circumstances may account for. For example, most of the negro tribes inhabiting tropical countries subsist by agriculture; the Caffres, who dwell in a temperate region, affording abundant pasturage, have become a nation of herdsmen. They are the Tatars of Africa; and the British Empire, when it took possession of a part of Caffraria, caught a large number of those questionable prizes.

But, after all, the Caffres are still negroes, and this settles the question of their capacity for civilisation. On the other side of Africa, we have the British colony of Sierra Leone, and the independent republic of Liberia, both of which comprise thousands of black Africans, who are as highly civilised as the majority of the inhabitants of some European states. In the West Indian colonies, moreover, there are many intelligent and accomplished gentlemen, of pure negro descent, holding government offices or seats in the local legislatures, and not inferior in ability or acquirements to many of their white associates. As the Caffres formerly inhabited the country about Delagoa Bay, from which a good many slaves have been conveyed to America, it is extremely probable that some of the citizens of Liberia and the colonists of the West Indies are of Caffre descent, and thus akin to those formidable barbarian warriors, whom some persons have inconsiderately termed irreclaimable savages. At all events, as the Caffres are African negroes, and as African negroes are known to be the most docile and improvable of all barbarians, there is good reason to hope that, by well-

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directed efforts, they may be induced to renounce their present wandering habits, betake themselves to the cultivation of their fertile country, and become at last a quiet, useful, and happy peasantry.

It must be admitted, that before this satisfactory result can be attained a very great change must be effected in the habits and dispositions of the Caffre people. At present, as Mr Fleming observes, the Caffres are purely a pastoral people. 'All their riches consist of cattle, and their wealth is estimated, not as with us by money, but by the number of heads of oxen each possesses. They only keep money for the purpose of purchasing cattle, and turn it into kine whenever they can. Their highest honour is that of being cattle-keepers. The men attend upon and milk the cows; the boys herd and watch the cattle in the pastures. They never allow their women, who are very much despised among them, to touch the cattle or to assist in the dairy department, the work of which, being counted one of dignity, is reserved only for the males. During times of peace, each kraal or Caffre village has a chief-herd. He always walks before the cattle, and by a peculiar whistle, which the oxen are trained to attend to, he leads them from one pasture to another, sometimes through the most intricate bush-country. These pastures he selects for them in the best localities, as, in many parts, what is called the *zuureveld*, or sour-field, preponderates, which the cattle will not touch. Besides which, even in the more verdant plains, the heat of the sun soon scorches up the grass. The Caffres then drive off their herds to another part, and set fire to the grass on the old ground. This fire runs often for miles together, until some intervening road or rivulet intercepts its progress, and leaves the country behind it a large tract of black ashes, as far as the eye can reach. The first thunder-storm, with its accompanying shower of rain, soon, however, changes this into a fresh green pasture of young tender grass, springing up from the uninjured roots beneath, which the ashes protect, while they enrich the land. In leading the oxen, therefore, from one plain to another, this chief-herd goes before the drove, and they know his call and follow him. Two assistant herds walk behind them, keep the cattle together, and stimulate the lazy. When war commences, however, their numbers are augmented by several other assistant herds. These are hired to run beside and behind the oxen, and with sharpened rods goad and prick them, and thus keep them excited and alert. They run in such numbers beside them, that they are enabled to keep them together in a compact drove.' In this way, a Caffre army has always its commissariat ready at hand wherever it is required. When the supplies from this source begin to fail, a foraging-party of active young warriors will make a swoop upon the cattle-fold of some unlucky settler. Sometimes the depredators are overtaken by the troops or burgher militia, and the cattle recaptured. More frequently the animals are driven off to the secret retreats of their captors in the bush; and in this way a Caffre war may be protracted so long as any colonial cattle remain within striking-distance of the frontier. Thus it will be seen how the pastoral and nomadic habits of the Caffres render them, as enemies, more troublesome and formidable than their mere numbers might lead one to suppose.

Agriculture, however, is not altogether unknown among them; but it is considered to be a kind of labour unworthy of a warrior, and is therefore left entirely to the women. The only grain they formerly raised was a species of millet, called by the settlers Caffre corn; but of late years, maize has been introduced, and is generally preferred by them. The implement which they used for turning up the ground was a wooden spade, resembling in shape the broad end of an oar. With such an inefficient instrument, the poor women could of course only scratch the soil

to the depth of three or four inches. This, doubtless, is one reason why agriculture has been so much neglected by the Caffres. Of late, great pains have been taken by the British authorities and the missionaries to introduce the use of ploughs, hoes, iron spades, and other farming implements, among them, and with good effect. When the Caffres first saw a plough at work, they gazed at it for a time in astonished and delighted silence; at last one of them gave utterance to his feelings in the exclamation: 'See how the thing tears up the ground with its mouth! It is of more value than five wives!'

This characteristic ejaculation gives a correct idea of the light in which women are regarded in Caffraria: they are looked upon as the slaves of their husbands. The easy labour of tending the cattle, and preparing the skins which are used for clothing, is all that the man will condescend to perform; his wife, or wives, must build the cabin, dig and plant the ground, gather the harvest, and perform all the other laborious drudgery which should properly fall to the share of the stronger sex. A marriage is simply a bargain, transacted between the father of the damsel and the future husband. The ordinary price of a wife is ten oxen; but a chief who buys a princess, must expect to pay five or six times that number. A Caffre father, who is blessed with three or four daughters, considers himself to have a little fortune in them; and the system has at least the advantage, that there is no danger of a Caffre maiden remaining unmarried. The difficulty, in fact, is the other way. It is by no means easy for a young man in Caffraria to obtain the number of oxen needful to procure him a helpmate. There are two very different ways in which, at present, the Caffre youth are accustomed to provide themselves with the stock requisite for this purpose: the one is, by taking service with a settler in the colony as herdsman or farm-labourer for a few years, receiving payment in cattle. At the end of his period of service, he collects his oxen and kine, drives them joyfully home, exchanges part of them for a wife, and sets up his household establishment as a Caffrarian citizen. But many high-spirited young gallants, disdaining this humble and protracted toil, adopt the more summary and congenial method of supplying themselves by thieving. At certain seasons of the year, when the nights are long and the moon is bright, frequent depredations are committed upon the droves of the settlers near the frontier. In fact, the Caffre custom of purchasing wives is invariably referred to by experienced colonists as one of the chief causes of those robberies of cattle which usually end at last in bringing about a war.

The introduction of Christianity among the inhabitants of Caffraria will, in time, put an end to this as well as to other still more objectionable usages. The converted Caffres are already numerous; and it is deserving of notice that, during this last war, all of them have either adhered to our side, or have remained neutral, none of them joining the enemy. The Caffre language has been reduced to writing, and several portions of the Scriptures, as well as some educational works, have been printed in it. In the year 1850, a few months before the war broke out, an industrious Wesleyan missionary at King William's Town commenced publishing a small monthly newspaper in the Caffre language. Nearly a thousand copies of this periodical are said to have been circulated—a striking evidence of the extent to which instruction has already been diffused among the natives. If, by strong military posts, or any other defensive means, the Caffres can be kept from assailing the colony for the next ten or twelve years, it is highly probable that, by that time, the change of feelings and habits will have made so much progress among them, that future outbreaks need not be dreaded. The conversion of this tribe of restless and warlike barbarians into a civilised and peaceful

community, will be an interesting process; and if it can be accomplished, there will be no reason for regretting the expense and trouble which it may have cost.

HOW THEY MANAGE THINGS IN THE HOUSE.

Is a foreign despot, very much in love with his own way of doing everything, were required to prove by a specific instance the superiority of his own single-handed system over that of constitutional folks, he has a fine opportunity. Let him take our legislative palace. A richer example of the old proverb concerning too many cooks could scarcely be found, than that which is afforded by the lighting and ventilating of the beautiful but costly structure wherein our noble lords and honourable members sit in midnight conference. We could almost imagine a Mrs Glasse or a Mrs Rundell preparing a recipe in the following form:—'Take a Prime Minister, a Chancellor of the Exchequer, a Commissioner of Woods and Forests, a House of Peers, a Committee of the same, a House of Commons, a Committee of the same, and a Royal Commission; let them all give contradictory orders to architects, engineers, and chemists; garnish with disputes and wrangles; and serve up.' The dish thus prepared is a sort of legislative syllabus, a mixture of air, light, and froth, one remarkable quality of which is, that nobody likes it, and another is, that everybody has to pay for it.

In all soberness, this question of the new Houses of Parliament affords striking proof of the evils resulting from divided responsibility. The thing to be done is not done well, because it is attempted by too many persons, without effective control by any one. It is really useful to watch the steps of this strange proceeding, as a lesson which ought to teach us better in future. Fortunately, we can do this without any advocacy of this or that person at the expense of another—it is the whole system, or rather the whole want of system, which deserves notice.

The reader need hardly be told that the old Houses of Parliament were destroyed by fire in 1834, and that the subsequent period of nineteen years has proved to be far from sufficient for the completion of a new one. A temporary structure was fitted up for the legislators, and in 1835 a committee of the Commons was appointed to determine seriously what should be done. Besides this, there were two Rebuilding Committees, one of each House; and the Woods and Forests department was authorised to receive plans and estimates. Moreover, the Commons' Committee recommended the appointment of a Royal Commission, to examine and report upon the plans sent in. Here we have a tolerable foretaste of confusion; and to make confusion worse confounded, another committee was appointed in the same year, to inquire into the best mode of lighting and ventilating the new structure. This committee partook a good deal of a scientific character; for among the witnesses examined we find the distinguished names of Faraday, Brande, Birkbeck, Sylvester, Smirke, and the Dr D. B. Reid who has since had so much to do in this matter. The committee had to determine how best to light the House, how to make it moderately warm in winter, and pleasantly cool in summer; and how to shape it so that the sound of the voice might best be heard. It was quite a learned affair: all about foci and reflecting surfaces and equable radiation and ascending currents and carbonic acid. The committee were a little puzzled by the flood of wisdom poured out upon them, and they did as committees often do—publish the evidence without offering any opinion on it, except on this point: that whatever plan of warming and lighting and ventilating were adopted, provision should be made for its adoption in the first instance by the architect. It shows how crude must

have been the state of practice on this subject, to render necessary any such indisputable proposition as this.

It was before this committee that Dr Reid explained his plan of warming and ventilating: the warming being effected by air conveyed through pipes after having passed over a heated apparatus, and the ventilating being effected by the aid of a fire, which would create a draught up a lofty shaft, and thus suck out the vitiated air from the House. The temporary House was ill contrived for sound, badly lighted, and badly ventilated; and the committee recommended that Dr Reid should try his hand on this as a guide towards the larger enterprise. During the year 1836, these doctoring processes went on. Air was introduced into a certain chamber; it was strained through gauze to free it from soot and dust; it was conveyed into another chamber, either through a hot passage or a cold passage according to the state of the weather; it entered a third chamber, where it formed a shallow equalising layer beneath the floor of the House; it entered this floor through 300,000 small holes, and then through the interstices of a kind of porous floor-cloth; it fed the honourable members with fresh air, and then escaped at the ceiling; and this escape was rendered more or less rapid by a fire placed at the bottom of a lofty shaft.

During the session of 1837, it was found that the prepared air which was driven up through the porous floor-cloth carried up millions of particles of dirt and dust. One honourable member complained of his eyes being choked by it, another of his nostrils, another of his ears, and another of his lungs. The lighting, too, was bad: more than L.1000 was expended in an experimental use of gas; some wanted the Drummond Light, some the Bude Light, some wax-candles: who was to decide where all were masters? Sir F. Trench proposed many changes, and submitted them to the Woods and Forests, and the Woods and Forests sent them to Dr Reid, and Dr Reid sent them back to the Woods and Forests, and the Woods and Forests sent them to the House of Commons. By the close of the session 1838, there had been an expenditure of L.6500 for the ventilating apparatus, and L.1500 for experiments connected with lighting.

The year 1839 found the honourable members as busy as ever in throwing light upon and ventilating each other. In May they appointed a committee 'to superintend the experiment of Mr Gurney to light the House, and to report their opinion thereon.' Mr Gurney's light, or the Bude Light, was an argand oil-lamp, through the flame of which a stream of oxygen gas was made to pass; the flame was brighter through being thus fed with oxygen instead of with common air. The committee reported that the light was good and steady; that it would not cost more than wax-candles; and that the position of the lamps would not interfere with the warming and ventilating of the House. They said, however, that further experiments were desirable; and here we find a curious example of divided responsibility, for while the first series of experiments were conducted by a committee of the House of Commons, that same committee recommended that the second series should be conducted by the Treasury. The committee caused the Bude Light to be set up, and asked scientific men for their opinions thereon. There was no want of science in the matter, certainly, for the witnesses included the names of Faraday, Arnot, Ure, Birkbeck, Barry, Gurney, Brewster, Wheatstone, and Lardner. The wax-candle theory and the Bude-light theory were stoutly upheld by their respective champions. By the month of February 1840, the House found it had had enough of the Bude Light—about L.800 had been spent in fitting up the apparatus—and now all was overturned, and the wax-candle theory reinstated.

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All this, be it remembered, occurred in the temporary House of Commons; but the time had now approached when it became desirable to determine what plans should be adopted in the new structure, and the legislative doctors entered upon a new course of proceeding. A committee was appointed in 1841, and this committee finding that Mr Barry could proceed in his work for another year or so, seemed glad to postpone the determination of certain questions between him and Dr Reid. In 1842 they met again, and so far decided as to recommend that the plan of ventilation which Dr Reid had been applying in the temporary House, should be adopted in principle in the new structure, and that the architect should perform his part towards the carrying out of the arrangement: there was to be a central shaft for ventilation. But here a curious instance of indecision, one among many, shewed itself: they could not decide whether the flues from 400 fireplaces, in the various rooms, had better be conveyed to this central shaft, or be provided with other outlets, and therefore the committee recommended *both* systems of flues, to be sure of being on the right side. One thing at any rate was settled, that £20,000 should be expended in building a ventilating shaft 250 feet high. Another committee in the same year were puzzling themselves to find out who had ordered Mr Gurney to put up his Bude Light in the temporary building, and how much he ought to receive for so doing. Although the House had upset the Bude Light in 1840, and taken to candles, they soon afterwards upset the candles, and returned to the Bude Light; and Mr Gurney, for two or three years, had some difficulty in knowing whether he was employed by the government or by the House, and in ascertaining whether he was to be paid by the one or the other. The committee tried to solve these knotty questions, and awarded a certain sum to Mr Gurney for his personal services; but he having made his light cheaper by substituting purified gas for oil, and atmospheric air for oxygen, deemed himself entitled to a larger recompense, and hence followed a busy official correspondence.

Another year found the Peers and Commoners anxious to get into their new palace; but as of course nobody knew anything about it, committees of both Houses were appointed to make inquiries, and in 1844 they devoted 180 folio pages to the evidence on this point. They found, among other curiosities, that the architect, a little embarrassed by having so many masters, had made many costly changes on his own individual responsibility, and he received what is popularly called a rap on the knuckles for so doing; and yet any of us, working for many employers, and not knowing who's who, would be very apt to do like him. Another year or two passed over, and the Peers, getting a little cross at being detained so long in their uncomfortable temporary chambers, appointed another committee in 1846 to inquire why and wherefore the new structure was not completed. The committee discovered what others had before discovered—that the architect and the ventilator were at loggerheads; that each interfered with what the other considered to be his own domain; that each claimed to have rightful authority; that neither was strong enough to vanquish the other; and that the multiple employers were more puzzled even than the combatants themselves. The Commons, too, appointed a committee for the same purpose at the same time; and a rich item in the whole affair was, that the two committees recommended different modes of proceeding in the event of further disagreements between the architect and the ventilator. To crown all, while one chemist (ventilator No. 1) was worrying the architect, another chemist (ventilator No. 2) was worrying No. 1.

John Bull, in balancing his accounts for 1846, found that he had paid £200,000 for temporarily accommodating his legislators since the fire; that he had laid out

£700,000 on the new structure; that no one knew how much more money or how many more years would be required; that the architect and the ventilator, who were to have managed together all about the warming and ventilating, had, like sincere friends in a tiff, not met each other for fifteen months; and that there were still all the materials left for a very pretty quarrel. And so did the year 1847 make its appearance. About the middle of this year, the architect reported that the 'fittings and furniture of the new House of Commons were not yet ordered,' because *no decision* had yet been arrived at concerning Dr Reid's plan of warming and ventilating this portion of the building; and at different periods of the year, the Commons put John Bull to the expense of printing further details respecting the progress of the ventilation-quarrel.

The reader can hardly fail by this time to have perceived that there was a tolerable number of masters by whom orders could be issued respecting this unfortunate lighting and ventilating. They comprised, in fact, the House of Lords collectively, the House in Committee, the House of Commons, a Committee of this House, Mr Speaker during the recess, the Treasury, and the Woods and Forests. These not being enough, an addition was made in 1848 by the appointment of a Royal Commission to have control over the whole affair. Already it was found that the original estimate of £700,000 had jumped up to £1,400,000. In 1849, the national paymasters, the House of Commons, wished to know how much more money would be wanted; they applied to the Treasury, the Treasury applied to the commissioners, the commissioners applied to the architect; and by a reverse route the architect's reply reached the House of Commons. The estimates were remarkable for the vigorous growth which characterised them; they had already sprung up from £700,000 to £1,400,000, and now they took another start up to £2,000,000.

One would have thought that the Royal Commissioners, having full powers intrusted to them, would have settled everything. Not so, however. The House of Commons appointed a committee in 1850, 'to inquire into and report upon the accommodation afforded in the new House of Commons.' As it is the warming and ventilating and lighting which we more especially take under notice here, we will simply state that the expenses put down under these headings to the spring of 1850, amounted to the startling sum of £87,000, with a prospective further expenditure for the same purpose of £45,000—together, £132,000: enough, one would fain think, to have built a very respectable legislative palace, instead of simply keeping the legislators warm and throwing light upon them. The proceedings of this year were diversified by a concentration of ignominious effluvia, arising from the sewers beneath the new structure; whereupon took place a sort of triangular duel—on the principle of that described in *Peter Simple*—between the architect, the ventilator, and the sewer-engineer, each endeavouring to remove the smell and its responsibility from himself. As sound and light, warmth and ventilation, are so closely connected, it may not be out of place to mention that the original costly ceiling of the new House of Commons is now almost wholly concealed by the costly present ceiling, which has been put up—at a lower level—because under the former arrangement honourable members could scarcely hear each other speak! In 1851, one member, perhaps the most indefatigable among the whole 658, 'defied any man to find a single apartment in the building that was suited to the purpose for which it was intended;' and on the same evening, the members of the government were very sedulous in declaring, that it was not to *them* that any of the responsibility rested concerning the costliness and plan of the arrangements. In 1852, after another £100,000 had been asked for, one of the members stated that Westminster Hall was running

with water, and that there was hardly a part of the House where leakages were not occurring. On another occasion, which may be within the recollection of the reader, Her Majesty attempted to read the royal speech in the House of Lords; but the windows had been so darkened by ornament and painted glass, that she could not see, and a candle had to be brought to assist in this mid-day ceremony. On the same occasion, if we mistake not, some of the peeresses, in all their jewelled and silken splendour, found themselves besprinkled with oil from some of the lamps within the building. And if any one had the curiosity to run through the proceedings of the House of Commons during the present session, and the newspaper comments connected therewith, he will find one member saying that the glare of the lights nearly blinded him; another, that the heat in the gallery nearly suffocated him; another, that the piercing current set in action by the ventilating apparatus would give him his 'death of cold;' while another alludes to the consumption of oranges and cold water during budget speeches, as the only means of washing away the choking dust rising from the perforated floor.

Let us not be mistaken. We are not casting ridicule on a building which is unquestionably one of the most magnificent in this country, and which it is impossible to look upon without a feeling of admiration; nor are we taking part in any of the discussions concerning the best mode of warming, lighting, and ventilating the vast structure, or of making its chambers acoustically fitted for their destined purposes: we are viewing the whole subject as a striking and instructive proof of the mischief, the inconvenience, and the expense resulting from contradictory orders and uncertain responsibility. It is not exactly analogous to the case of two celebrated individuals, in which Tom was doing nothing, and Jack was helping Tom; for here there have been far too many Jacks and Toms, doing too many things, in too many different ways. The analogy is somewhat more close to the little woman who could not get home at night because her pig would not get over the stile, because the stick would not beat the pig, because the fire would not burn the stick; and so forth. Here, for the old woman, read the new Parliament House; and for the pig and the stick and the fire, read the Commissions and Committees and Boards. Nobody would do anything at the right time; everybody did many things at the wrong time; and so the old woman has not got home—that is, the House is not yet comfortably lighted or warmed, or cooled or 'voiced.' We have sufficient reliance on the professional skill of those actually engaged in the works, to entertain an opinion that, had there not been conflicting instructions and disputed responsibility, the whole affair would have been better done at half the cost actually incurred. This is a matter which touches us all—*vide* the tax-gatherer.

LODGING-HOUSE AT NEW YORK.

We have been allowed to examine the plans of a new edifice which Mr James M. Sanderson designs to erect on the Fifth Avenue, somewhere between Thirtieth and Fortieth Street. Its height will be eight stories; and its dimensions on the ground 200 feet square, with a courtyard in the centre, entered by a *porte cochère*. The exterior will be of iron, with inner-walls and partition-walls of brick. It will be thoroughly fireproof in every part—furnished with safe and commodious apparatus to transport the occupants from the ground to the eighth or to any intermediate story—replete with gas, baths, water-closets, ventilators, and every modern convenience—arranged in suites of apartments of different extent, to be rented, furnished or unfurnished, as may be desired, at rates varying from 300 to 1000 dollars a year; with a restaurant, from which meals will be served to order at reasonable prices to those who prefer to take them in their own rooms—with splendid promenades on the lofty roof, or in a

garden, 50 feet by 200, below—with gymnasiums and tennis alleys for ladies and gentlemen, and a conservatory of flowers, reading-rooms, ball-room, conversation-rooms, and every other convenient appendage to so large an establishment. Here, it is estimated, that a family of moderate income may live in a degree of elegance and comfort unattainable in separate houses or in ordinary hotels, except by an exorbitant and impossible expenditure. The whole number of persons whom the house will accommodate we suppose will be about 1000. The establishment will be erected by a joint-stock company, incorporated under a general law recently passed; its cost will be 400,000 dollars, of which 125,000 dollars will be required to buy the land. We congratulate Mr Sanderson on the admirable features of his design. It will complete the innovation already introduced in American domestic habits by the practice of living in hotels, combining as it does with what is convenient and elegant in that mode of life, a degree of privacy, independence, and economy, hitherto unknown to it. We have not a doubt that it will prove an excellent speculation, and find numerous imitators.—*New York Tribune*.

THE GOLDEN GATE.

A lady stood at the golden gate,

At the golden gate shut close and lorn;

The little spring-birds chirped merry and sweet,

The little spring-flowers sprang up at her feet;

She smiled back a spring-smile, gay and young—

'Twill open, open to me, ere long!

Wait,' said the lady—'wait, wait:

There never was night that had no morn.'

The lady sat at the golden gate;

The sun had withered from off the thorn:

Warm July roses crushed cheek to cheek

In a rapturous stillness, faint and weak;

And a languid love-air filled the breeze,

And birds ceased singing in nest-hung trees:

'Wait,' said the lady—'wait, wait:

There never was night that had no morn.'

The lady knelt at the golden gate,

The dumb, closed gate—'forlorn, forlorn;

The sun laid on her his burning hand,

The reapers' song came over the land,

And the same round moon that lighted the sheaves,

Shewed at her feet dead, drifted leaves:

'Alas!' sighed the lady. 'Yet, wait, wait:

There never was night that had no morn.'

The lady crouched at the golden gate,

With steadfast watch—but so lorn, so lorn!

The earth lay whitening in one shroud,

The wind in the woods howled long and loud;

Till the frosty stars shot arrowy rays,

And fixed for ever her death-strong gaze.

A soul rose singing: 'No more I wait:

On earth was night—in heaven is morn.'

VANITY OF GREAT MEN.

In one instance, Lord Wellington is not like Frederick the Great. He is remarkably neat, and most particular in his dress considering his situation. He is well made, knows it, and is willing to set off to the best what nature has bestowed. In short, like every great man, present or past, almost without exception, he is vain. He cuts the skirts of his own coats shorter to make them look smarter; and only a short time since, I found him discussing the cut of his half-boots, and suggesting alterations to his servant when I went in upon business. The vanity of great men shews itself in different ways, but, I believe, always exists in some shape or other.—*Larpen's Private Journal*.

Printed and Published by W. and R. CHAMBERS, High Street, Edinburgh. Also sold by W. S. Orr, Amen Corner, London; D. N. CHAMBERS, 55 West Nile Street, Glasgow; and J. M'GLASHAN, 50 Upper Sackville Street, Dublin.—Advertisements for Monthly Parts are requested to be sent to MAXWELL & CO., 31 Nicholas Lane, Lombard Street, London, to whom all applications respecting their insertion must be made.